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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,170	04/11/2005	Flemming Munk	742114-13	5060

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EXAMINER

MORALES, JON ERIC C

ART UNIT	PAPER NUMBER
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3766

NOTIFICATION DATE	DELIVERY MODE
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01/25/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/531,170

Applicant(s)

MUNK, FLEMMING

Examiner

Jon-Eric C. Morales

Art Unit

3766

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-5 is/are allowed.
- 6) ☒ Claim(s) 6-8 and 10 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Oath/Declaration

1. Examiner withdraws the requirement for a new oath/declaration to be submitted by applicant.

Priority

2. Examiner withdraws need to declare priority for PCT/DK03/00680.

Specification

3. The objection to the abstract has been withdrawn in light of submission of a new abstract.

Claim Objections

4. Claims 6 and 9 objected to because of the following informalities: Claims 6 and 9 are dependent on a cancel claimed. Examiner is treating these claims to be dependent off of new independent claim 10. Appropriate correction is required.
5. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6-8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Bennet, Jr. et al. (US Patent No. 5012815) (hereinafter Bennet). Regarding claim 10, Bennet discloses the use of a microphone (transducer) and an amplifier to receive heart sound that create phonocardiographic signal (column 1 lines 27-35). This signal is characterized by a first sound and a second sound in the heart cycle with relation to time interval (column 2 lines 46-49, 56-59, and 65-67 column 3 lines 1-5). Signal is classified and features are extracted based on frequency (energy in relation to time by use of a bandpass filter, sampling at a high frequency (LF^s) where L is an integer with the power of 2 (power filtering) to create a higher frequency range and also use of a low frequency filtering (low pass filter) to display the signal spectra when the resolution is low (column 5 lines 10-14, 24-27, 34-37, 43-46).

Concerning claim 6, Bennet discloses extracting first and second heart sounds by classification according to heart sounds frequency (energy) level (column 5 lines 52-53). Eliminates contributions of the first and second heart sounds and performs spectral analysis and feature enhancement obtains energy relative to time interval (column 2 lines 65-67 column 3 lines 1-5, column 5 lines 10-14, 24-27, column 6 lines 39-44). Defined data classifies the distribution of energy and a comparison of the energy distributions to known heart murmur levels (column 13 lines 10-35). An analog to digital converter is used to convert heart sound signal into sampled data (column 4 lines 41-63).

Regarding claims 7 and 8, heart sound is delivered to stereophonic headphones. The sound distribution comes from a single-channel input (fig. 5, column 4 lines 33-35).

The heart sounds signal appear to be spread out spatially in order to hear murmurs with respect to the first and second heart sounds (column 4 lines 5-13, 20-32).

Allowable Subject Matter

7. Claims 3-5 are allowed over prior art of record.

The following is an examiner's statement of reasons for allowance:

In regards to claim 3, the procedure of extracting murmur information including obtaining a systole and a diastole power vector consisting of the sum of n_1 powers measured in each of the n_2 time slices and obtaining a systole and diastole mean frequency vector by weighting the power value for each n_1 frequency bands with the mean frequency of the corresponding element in the respective systole of diastole power vector has not been disclosed or suggested in the prior art when combined with the rest of the limitations of claim 3.

Response to Arguments

8. Applicant's arguments with respect to claim 6-8 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon-Eric C. Morales whose telephone number is 571-272-3107. The examiner can normally be reached on Monday through Friday from 8am - 5pm EST.

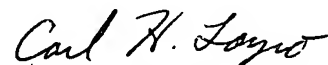
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl H. Layno can be reached on 571-272-4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jon-Eric Morales
/Jon-Eric Morales/
Patent Examiner
Art Unit 3766

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Carl Layno
Supervisory Patent Examiner
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CARL LAYNO
PRIMARY EXAMINER